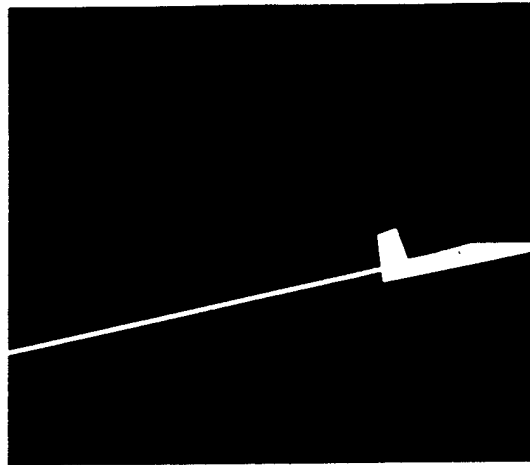


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**SIDAC**

Supportability Investment Decision Analysis Center

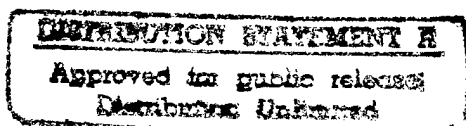
Contract No. F33657-92-D-2055/0087  
CDRL A009, Data Item DI-MGMT-80057  
Report No. SID/MR-95/0076

(Unclassified)

## **TASK ASSIGNMENT PLAN**

for

**Army Logistics  
Assessment Program**



Prepared for

HQ USA/DALO-RMI  
500 Army Pentagon  
Washington, DC 20310-0500

20 January 1995

19970128 204

Prepared by

Synergy, Inc.  
1763 Columbia Rd. NW  
Washington, DC 20009-2834

Submitted by

SIDAC  
5100 Springfield Pike  
Dayton, Ohio 45431

DTIC QUALITY INSPECTED 1

This report has been approved for publication.

---

Maj David Payne  
Secondary Items Division  
HQ USA/DALO-RMI  
500 Army Pentagon  
Washington, DC 20310-0500

FOR THE COMMANDER

*Approved for public release, distribution is unlimited.*



Synergy, Inc.  
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24 January 1995

Secondary Items Division  
HQ USA/DALO-RMI  
500 Army Pentagon  
Washington, DC 20310-0500  
Attn: Maj David Payne

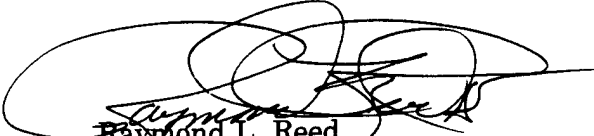
Dear Maj Payne:

Contract F33657-92-D-2055  
SIDAC Task No. 101  
Delivery Order No. 0087  
CDRL A009, Data Item MGMT-80057

Enclosed is the Task Assignment Plan for *Army Logistics Assessment Program*, as required under the above-referenced contract.

If you have questions, please contact me at 202-232-6261.

Sincerely,



Raymond L. Reed  
Task Manager

RLR/wet

c: DCMAO (Mr. Leon Sulton) Letter Only  
SIDAC (Mr. Heston Hicks)

**REPORT DOCUMENTATION PAGE***Form Approved*  
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**12b. DISTRIBUTION CODE****13. ABSTRACT (Maximum 200 words)**

This Task Assignment Plan explains how Synergy will fulfill the HQ USA/DALO-RMI requirement for the development of an Army Readiness Model. The model will assess peacetime readiness expected as a result of past, current, and projected Investment Variables (Repairable buy and Repair funding streams) and Noninvestment Variables (Crewing, Staffing, Utilization). The Army model will be an adaptation of the Funding/Availability Multi-Method Allocation for Spares model (FAMMAS) used extensively by both HQ U.S. Air Force and Air Force Materiel Command (AFMC).

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Army's 16 SORTS Weapon Systems, Funding Availability Multi-Method Allocation for Spares (FAMMAS)

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**TASK ASSIGNMENT PLAN**  
**for**  
**Army Logistics Assessment Programs**

Prepared for

HQ USA/DALO-RMI  
500 Army Pentagon  
Washington, DC 20310-0500

20 January 1995

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# **TASK ASSIGNMENT PLAN**

## **for**

### **Army Assessment Program**

#### **Introduction**

Synergy will fulfill the HQ USA/DALO-RMI requirement for the development of an Army Readiness Model. The model will assess peacetime readiness expected as a result of past, current, and projected Investment Variables (Repairable buy and Repair funding streams) and Noninvestment Variables (Crewing, Staffing, Utilization). The Army model will be an adaptation of the Funding/Availability Multi-Method Allocation for Spares model (FAMMAS) used extensively by both HQ U.S. Air Force and Air Force Materiel Command (AFMC).

#### **Goals and Objectives**

Synergy will perform wartime logistics assessments in support of the Army's sixteen SORTS weapon systems. The sixteen systems include: M1A1, M2/M3 Bradley, AH-64, UH-60, CH-47D, OH-58D, M1, M901, M966 TOW, HEMMT, HMMWV, M109 Howitzer, MLRS, and PATRIOT. Synergy will collect and analyze historical maintenance and funding data. Synergy will adapt standard Army OPTEMPO measures for use within FAMMAS and a wartime model as required. The completed analysis will be used to conduct wartime analysis trade-offs among the sixteen weapon systems.

Synergy will develop, test, and install in FAMMAS a function that enables the Army to perform cost effectiveness trade-offs for funded and/or proposed weapon system modifications. Synergy will develop a set of algorithms that affect the mission capable rate projections of FAMMAS to reflect the impact of weapon system reliability and maintainability modifications, as well as life-cycle extensions programs, overhead, and rebuild programs.

Synergy will research, design, code, test, validate, and install a separate module within FAMMAS that enables the logistics community to assess the impact on system readiness rates caused by MODs, Depot Maintenance, and common support equipment (CSE).

#### **Technical Approach**

Upon completion of the contract to conduct initial peacetime assessments on the Army's sixteen SORTS weapon systems, Synergy will conduct initial proof-of-concept analysis on wartime readiness assessment on the sixteen systems. Synergy will develop the general architecture for an Army Wartime Assessment Model. The first phase will be to collect and analyze historical WRM funding, POM WRM funding, war tasking data, and force structure data. Phase two will consist of determining appropriate OPTEMPO measurements for the differing weapon systems. Synergy will modify the structure and/or algorithms if research deems it necessary. The third and fourth phases of the analysis will consist of performing wartime capability assessments using DESERT SHIELD/STORM data and demonstrating the feasibility of a Tactical Logistics Assessment Model for the sixteen weapon systems.

Synergy will explore different trade-off assessments among all sixteen weapon systems. Synergy will analyze weapon system data for indicators that show how variations in system reliability, maintainability, life-cycle extension programs, and rebuild programs affect weapon system readiness. Once the effects of each variable are determined, Synergy will develop algorithms that reflect changes to these variables. A briefing on the results will be held, including a comparison of prior assessments.

Synergy will add the capability to the Army FAMMAS model to assess MODs, Depot Maintenance, and CSE. The first phase will be to collect historical data on modifications, depot maintenance, and support equipment, and then define a link between each factor and weapon system availability. The second phase will be to modify the Army FAMMAS mode to incorporate this capability. The third phase will consist of performing trade-off assessments among all sixteen weapon systems and provide a briefing on the results including prior assessments.

### **Project Schedule and Milestones**

The Work Breakdown Structure (WBS) in Figure 1 represents Synergy's proposed timeline for accomplishing the tasks associated with the statement of work. Synergy will apply the most experienced personnel on this project and will produce the best products possible within the time and funds allocated by the government. The Synergy program manager will prioritize the efforts for the tasks in order to make the most efficient and effective use of available resources.

### **Deliverables**

The following list of deliverables will be submitted for the efforts performed under this task:

- (1) Final technical report on the task (CDRL A001). This report will present the results of the research and analysis performed in the task.
- (2) Functional Description of Software (CDRL A002) to aid in the instruction and use of the software.
- (3) Periodic progress and status reports submitted every 30 days throughout the duration of the contract (CDRL A004). These reports will keep the SIDAC COTR informed of the progress of the task on a monthly basis.
- (4) Software Users Manual to aid in the instruction and use of the software (CDRL A006).
- (5) Presentation Material (CDRL A007). The final briefing on the task results.
- (6) Task Assignment Plan (CDRL A009). The plan presented in this document covers the objectives, technical approach, and schedule for performance of the statement of work.
- (7) The software (CDRL A014) necessary to complete the task.

### **Project Staffing and Experience**

This project will be staffed with extremely well qualified personnel. The education, capabilities, and experience of key personnel are summarized here.

Mr. James A. Lutz, Program Manager, Ph.D. program in Mathematics/ graduate studies in operations research and statistics. He has more than 20 years experience in logistics management, capability assessment, program and budget analysis, and operations analysis. As a member of Synergy's Operations Management Committee, he directs the performance of work on all Synergy contracts. He specializes in the development and application of quantitative models for analysis of policies in logistics management, budgeting, capability assessment, and R&M.



Mr. Raymond L. Reed, Sr. Logistics Management Specialist, M.S. Organic Chemistry. Mr. Reed has more than 20 years experience in Air Force logistics. His areas of expertise include logistics management, tactical systems analysis, and acquisition management. He serves as the project manager for development and implementation of new parametric/interactive models, designed to perform logistics resource assessments of the U.S. Air Force's air mobility and air combat weapon systems. He will serve as the project manager for the tasking described in this document.

Mr. William E. Faragher, Sr. Scientist, M.A. Mathematics. Mr. Faragher has more than 35 years experience in operations research, and logistics analysis. He is responsible for the software development for a suite of logistics assessment models designed for estimating the impact of budget decision on aircraft readiness and sustainability. He directed the development of a data base management system that imports data from a variety of sources and generates a set of output files for use in Synergy-developed logistics assessment models. Because of his strong scientific and mathematical background, he will serve this tasking on a consultary basis.

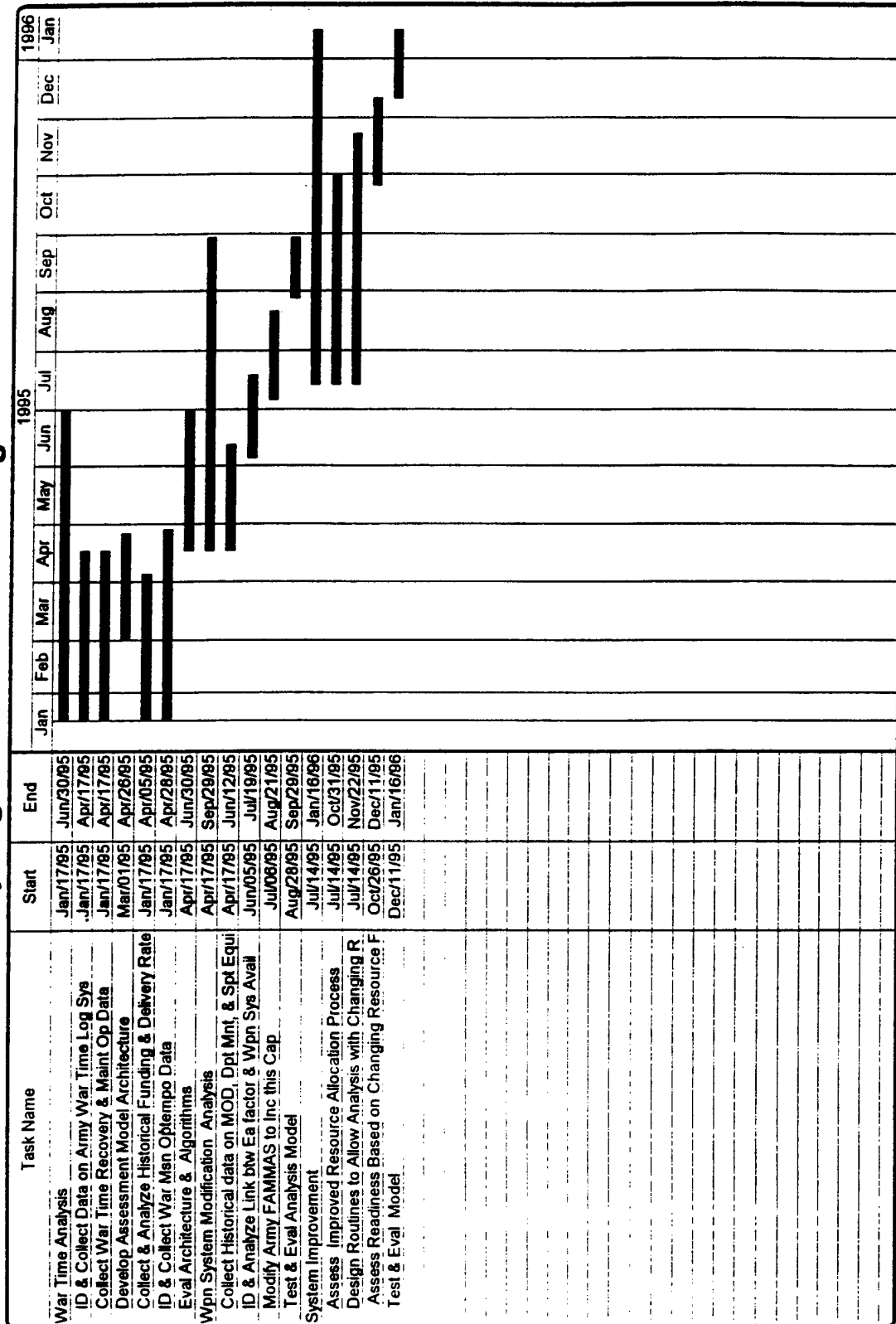
Mr. Sean K. Trench, Associate Analyst I, B.A. Political Science. Mr. Trench is the supervisor for all O&M assessments for Army. He is responsible for completing the development of the FAMMAS Model, which provides the Army with projections concerning the health of their weapon systems. He is responsible for designing, testing, and delivering this model to HQ USA/DALO-RMI.

#### **Point of Contact**

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Washington, DC 20310-0500

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# Army Logistic Assessment Program



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Milestone ^ Summary

Figure 1. Project Schedule and Milestones